

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~A computer system which includes an apparatus for monitoring the performance of a multithreaded processor, said~~ An apparatus, comprising:
- a processor adapted to execute a plurality of threads simultaneously, each thread including a series of instructions;
- an event detector to detect a predetermined list of events and to transmit an event detection signal to a multiplexer;
- an event selection control register (ESCR) to instruct the multiplexer to select an event from the predetermined list of events by qualifying the event based on a set of conditions;
- a plurality of programmable ~~an event counters~~ counter to count the event qualified by the multiplexer ~~two or more independent events generated by one or more threads of said plurality, said two or more events selected from a predetermined list of events resulting from the normal operation of said processor;~~
- ~~one or more registers to control the operation of said event counters, each register also selecting the events to be counted from said list of events; and~~
- an access location to allow access to said ~~the event counters~~ counter to determine a current count of ~~said events~~ the event.
2. (Currently Amended) ~~The computer system~~ apparatus of claim 1, wherein ~~said~~ the access location allows access to determine ~~said~~ the count without disturbing the operation of ~~said counters~~ event counter.

3. (Currently Amended) The ~~computer system apparatus~~ of claim 2, wherein each register ~~the ESCR~~ comprises a first field of bits ~~for choosing one or more events to choose the event~~ to be counted.
4. (Currently Amended) The ~~computer system apparatus~~ of claim 3, wherein each register ~~the ESCR~~ further comprises a second field of bits ~~for choosing one or more events to choose the event~~ to be masked and not counted.

Claims 5-6 (Cancelled)

7. (Currently Amended) The ~~computer system apparatus~~ of claim 6~~1~~, wherein ~~said counters the event counter is~~ can be stopped and cleared before a new event is selected.
8. (Currently Amended) The ~~computer system apparatus~~ of claim 7, wherein ~~said counters the event counter is~~ can be preset to a certain state.
9. (Currently Amended) The ~~computer system apparatus~~ of claim 5~~1~~, wherein ~~said the~~ predetermined list of events includes hardware performance and breakpoint events.

Claims 10-17 (Cancelled)

18. (Currently Amended) A method, ~~for monitoring the performance of a multithreaded processor, said method comprising:~~
executing a plurality of threads simultaneously, each thread including a series of instructions;
detecting a predetermined list of events and transmitting an event detection signal to a multiplexer;
instructing the multiplexer to select an event from the predetermined list of events by qualifying the event based on a set of conditions;

counting a plurality of independent events generated by one or more threads
of said plurality, said plurality of events selected from a
predetermined list of events resulting from the normal operation of
said processor the event qualified by the multiplexer using an event
counter;
controlling the operation of said event counters, each register also selecting
the events to be counted from said list of events; and
accessing said event counters the event counter to determine a current count of said
events the event.

19. (Cancelled)

20. (Currently Amended) The method in claim 19 18, wherein ~~said the~~
qualifying of the event includes requiring that said plurality of events have
the event has a preselected thread ID.

21. (Currently Amended) The method in claim 20, wherein ~~said the~~ qualifying of
the event further includes requiring that said plurality of events have the
event has a preselected thread current privilege level (CPL).

Claims 22-24 (Cancelled)

25. (New) The apparatus of claim 1, wherein the qualifying of the event is
performed using a thread ID and a thread current privilege level (CPL).

26. (New) The apparatus of claim 25, wherein the thread ID indicates a source of
the event, the source include a thread of the plurality of threads where the
event occurred.

27. (New) The apparatus of claim 25, wherein the thread CPL indicates a privilege level at which the thread at which the event occurred was operating when the event occurred.
28. (New) The method of claim 20, wherein the preselected thread ID represents a thread of the plurality of threads where the event occurred.
29. (New) The method of claim 21, wherein thread CPL indicates a privilege level at which the thread was operating at when the event occurred.
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